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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,388	03/15/2004	Sung-Jen Hsiang		3159

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EXAMINER	
LU, KUEN S	
ART UNIT	**PAPER NUMBER**
2167	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/801,388	HSIANG, SUNG-JEN	
	Examiner	Art Unit	
	Kuen S. Lu	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *December 12, 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Action is responsive to Applicant's Amendment file December 12, 2006. Applicant's Amendment made to amend claims 1, 4, 7-8 and 12, and cancel claim 2 is acknowledged and Examiner's rejection of claim 1-7 and 12 under 35 USC § 101 is hereby withdrawn, as necessitated by the Amendment.

2. As to Applicant's Arguments/Remarks filed December 12, 2006, please see Examiner's response in "***Response to Arguments***", following this Office Action for Final Rejection (hereafter "the Action"), shown next. Please note claims 1 and 3-12 in the application are pending.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3.1. Claims 1 and 3-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over pc/MRP for Windows, Version 7.70A, 1/6/03, Software Arts Consulting Inc., hereafter "pcMRP" and further in view of Oracle® Bills of Material User's Guide, Release 11i, June 2002, Oracle® (hereafter "OraBOM").

As per claim 1, pcMRP teaches "A computer-based bill of material (BOM) sorting system for sorting original BOMs" (See Page 33 where various inventory data included by MRP process and infinite MRP reports may be sorted for reporting), the system comprising:

"a database server comprising an original BOM file which comprises information on parts for a product and a part specification file which comprises assembly methods of the parts" (See Pages 299, line 2-4; Page 362, line 2; Page 157, lines 21-37; Pages 84-85, Stock Room Module and Flow-chart; and Page 160, Reference Designators where databases are supported by NT server, BOM files are utilized to provide item for an end product and a part master file provides parts data; methods for converting parts into assembly and WIP are described; and special instructions for assembly is listed).

PcMRP does not explicitly teach that the pcMRP is implemented on a plurality of computers connected to a database server.

However, OraBOM teaches "a plurality of designating computers connected to the database server" by implementing a multi-org BOM on computers on which database based BOM application is implemented.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine the teachings of pc-based MRP and network based BOM because both references are directed to material resource planning and the combined teaching of the references would have extend the functionality of pcMRP to include detailed functionality of manufacturing provided by the BOM of OraBOM.

The combined teaching of the pcMRP and OraBOM reference further teaches the following for each of the designating computers:

"a BOM sorting module for accessing the original BOM file and the part specification file, for sorting parts in the original BOM file into surface mount device (SMD) parts, pin through hole (PTH) parts, and empty parts according to the assembly methods in the part specification file" (See pcMRP: Pages 165-166 where all BOMs can be sorted by part number and audited against part master files for reporting discrepancies between BOM and part master files, and OraBOM: Pages 2-4 and Glossary-51 where pick list is a well established technique for reporting components requirements by assembly method, or production lines to which surface mount and through hole are different production lines) and

"for generating a plurality of sub-files, and for integrating all the sub-files into an executable BOM file that is to be stored in the database server" (See pcMRP: Page 59 where desired data is selected to create address book database file and merging data with document, and OraBOM: Page 5-37 where BOMs are created and stored in database).

As per claim 8, pcMRP teaches "A bill of material (BOM) sorting method for sorting original bills of material (BOMs)" (Page 33 where various inventory data included by MRP process and infinite MRP reports may be sorted for reporting), the method comprising the steps of:

"accessing an original BOM file and a part specification file" (See Pages 299, line 2-4; Page 362, line 2; Page 157, lines 21-37; Pages 84-85, Stock Room Module and Flow-chart; and Page 160, Reference Designators where databases are supported by NT server, BOM files are utilized to provide item for an end product and a part master file provides parts data; methods for converting parts into assembly and WIP are described; and special instructions for assembly is listed); and

pcMRP does not explicitly teaches "sorting parts in the original BOM file into surface mount device (SMD) parts, pin through hole (PTH) parts, and empty parts according to assembly methods in the part specification file", although pcMRP does teaches sorting BOM by part number and audited against part master files for reporting discrepancies between BOM and part master files at Pages 165-166.

However, OraBOM teaches pick list for reporting components requirements by assembly method, or production lines to which surface mount and through hole are different production lines and assembly methods at Pages 2-4 and Glossary-51.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine the teachings of pc-based MRP and network based BOM because both references are directed to material resource planning and the combined teaching of the references would have extend the functionality of pcMRP to include detailed functionality of manufacturing provided by the BOM of OraBOM.

The combined teaching of the pcMRP and OraBOM reference further teaches "generating a plurality of sub-files; and integrating all the sub-files into an executable BOM file" pcMRP: Page 59 where desired data is selected to create address book

database file and merging data with document, and OraBOM: Page 5-37 where BOMs are created and stored in database).

As per claim 12, pcMRP teaches "A computer-enabled method of sorting bills of material (BOMs)" (See Page 33 where various inventory data included by MRP process and infinite MRP reports may be sorted for reporting), comprising:
"providing a database server comprising an original BOM file and a part specification file" (See Pages 299, line 2-4; Page 362, line 2; Page 157, lines 21-37; Pages 84-85, Stock Room Module and Flow-chart; and Page 160, Reference Designators where databases are supported by NT server, BOM files are utilized to provide item for an end product and a part master file provides parts data; methods for converting parts into assembly and WIP are described; and special instructions for assembly is listed).

PcMRP does not explicitly teach computers for different designated functionalities as in "using a BOM sorting module in a designating computer to connect the database server via a database connection module of the designating computer and a database management module of the designating computer", although pcMRP does teach sorting BOM by part number and audited against part master files for reporting discrepancies between BOM and part master files at Pages 165-166.

However, OraBOM teaches computers for different designated functionalities by implementing a multi-org BOM on computers on which database based BOM application, modules of BOM and database is implemented.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine the teachings of pc-based MRP and network based BOM because both references are directed to material resource planning and the combined teaching of the references would have extend the functionality of pcMRP to include detailed functionality of manufacturing provided by the BOM of OraBOM.

The combined teaching of the pcMRP and OraBOM reference further teaches the following:

"so as to integrate a plurality of sub-files into said executable BOM file, wherein said sub-files are generated by sorting parts in the original BOM file into surface mount device (SMD) parts, pin through hole (PTH) parts, and empty parts according to assembly methods in the part specification file" (See pcMRP: Pages 165-166 where all BOMs can be sorted by part number and audited against part master files for reporting discrepancies between BOM and part master files, and OraBOM: Pages 2-4 and Glossary-51 where pick list is a well established technique for reporting components requirements by assembly method, or production lines to which surface mount and through hole are different production lines); and

"storing said executable BOM file in the database server" (See pcMRP: Page 59 where desired data is selected to create address book database file and merging data with document, and OraBOM: Page 5-37 where BOMs are created and stored in database).

As per claim 3, the combined teaching of the pcMRP and OraBOM reference further teaches "The BOM sorting system according to claim 1, wherein the information on the

parts comprise a part item name, amount of the part in the product, the part's position in the product, the part's specification, and a detailed description of the part" (See pcMRP: Page 65, item 5.1.4 where inventory menu displays part description, where used, quantity, assembly, part number and miscellaneous information, etc).

As per claim 4, the combined teaching of the pcMRP and OraBOM reference further teaches "The BOM sorting system according to claim 1, wherein the data on the assembly methods of the parts comprise information on SMD parts, PTH parts and empty parts" (pcMRP: Pages 165-166 where all BOMs can be sorted by part number and audited against part master files for reporting discrepancies between BOM and part master files, and OraBOM: Pages 2-4 and Glossary-51 where pick list is a well established technique for reporting components requirements by assembly method, or production lines to which surface mount and through hole are different production lines).

As per claim 5, the combined teaching of the pcMRP and OraBOM reference further teaches "The BOM sorting system according to claim 1, wherein the sub-files comprise an SMD sub-file, a PTH sub-file and an empty sub-file corresponding to different assembly methods" (pcMRP: Pages 165-166 where all BOMs can be sorted by part number and audited against part master files for reporting discrepancies between BOM and part master files, and OraBOM: Pages 2-4 and Glossary-51 where pick list is a well established technique for reporting components requirements by assembly method, or production lines to which surface mount and through hole are different production lines)

As per claim 6, the combined teaching of the pcMRP and OraBOM reference further teaches "The BOM sorting system according to claim 1, further comprising a database connection module for connecting the BOM sorting module with the files in the database server, wherein the files comprises the part specification file, the original BOM file and the executable BOM file" (See pcMRP: Page 76, item 5.1.9 and Page 58, item 4.1.9 where an application in the form of menu connects to database allowing users to scroll, edit, delete, undelete and query against records in inventory database and sorting records accordingly).

As per claim 7, the combined teaching of the pcMRP and OraBOM reference further teaches "The BOM sorting system according to claim 1, wherein the database server comprises a database management module for managing the part specification file, the original BOM file and the executable BOM file, and for creating, adding, deleting, updating and inquiring records in the part specification, original BOM and executable BOM files" (See pcMRP: Page 76, item 5.1.9 and Page 58, item 4.1.9 where an application in the form of menu connects to database allowing users to scroll, edit, delete, undelete and query against records in inventory database and sorting records accordingly).

As per claim 9, the combined teaching of the pcMRP and OraBOM reference further teaches "The BOM sorting method according to claim 8, wherein the part specification

file is used for storing information on suppliers, vendors, manufacturing management and inventory control, and the assembly methods of parts" (See pcMRP: Pages 299, line 2-4; Page 362, line 2; Page 157, lines 21-37; Pages 84-85, Stock Room Module and Flow-chart; and Page 160, Reference Designators where databases are supported by NT server, BOM files are utilized to provide item for an end product and a part master file provides parts data; methods for converting parts into assembly and WIP are described; and special instructions for assembly is listed, OraBOM: where content outlines suppliers, vendors, manufacturing and inventory management).

As per claim 10, the combined teaching of the pcMRP and OraBOM reference further teaches "The BOM sorting method according to claim 9, wherein the assembly methods comprise SMD parts, PTH parts and empty parts" (pcMRP: Pages 165-166 where all BOMs can be sorted by part number and audited against part master files for reporting discrepancies between BOM and part master files, and OraBOM: Pages 2-4 and Glossary-51 where pick list is a well established technique for reporting components requirements by assembly method, or production lines to which surface mount and through hole are different production lines).

As per claim 11, the combined teaching of the pcMRP and OraBOM reference further teaches "The BOM sorting method according to claim 8, wherein the sub-files comprise an SMD sub-file, a PTH sub-file and an empty sub-file" (pcMRP: Pages 165-166 where all BOMs can be sorted by part number and audited against part master files for

reporting discrepancies between BOM and part master files, and OraBOM: Pages 2-4 and Glossary-51 where pick list is a well established technique for reporting components requirements by assembly method, or production lines to which surface mount and through hole are different production lines).

Conclusion

4. The prior art made of record

U. pc/MRP for Windows, Version 7.70A, 1/6/03, Software Arts Consulting Inc.

V. Oracle® Bills of Material User's Guide, Release 11i, June 2002, Oracle®

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A. U.S. Patent No. 6,247,128

B. U.S. Patent No. 6,898,472

C. U.S. Patent No. 6,871,113

Response to Arguments

5. The Applicant's arguments filed on 12, 2006 have been considered but they are moot on new grounds of rejection.

Conclusions

6. Applicant's amendment necessitated the new grounds of rejection presented in this Office Action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1 .136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuen S. Lu whose telephone number is (571) 272-4114. The examiner can normally be reached on Monday-Friday (8:00 am-5:00 pm). If attempts to reach the examiner by telephone pre unsuccessful, the examiner's Supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 703-305-39000.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for Page 13 published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 703-305-3900 (toll-free).

Kuen S. Lu

Patent Examiner, Art Unit 2167

February 23, 2007

JOHN COTTINGHAM
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